

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (CURRENTLY AMENDED) A method comprising:
illuminating a first surface of a wafer with radiation from a radiation source,
wherein a second surface of the wafer opposite the first surface is positioned on a reflective support ~~or is coated with a reflective material~~, the reflective support being a separate element from the wafer being illuminated;
receiving a signal that includes information germane to total reflectance of the radiation from the wafer;
comparing the information to information in a database; and
determining one or more characteristics of the wafer based on the comparing
wherein the one or more characteristics are selected from a group consisting of thickness and surface characteristics.
2. (ORIGINAL) The method of claim 1 wherein the database includes calculated information.
3. (ORIGINAL) The method of claim 1 wherein the database includes measured information.
4. (ORIGINAL) The method of claim 1 wherein the signal includes spectral information.
5. (ORIGINAL) The method of claim 1 wherein the database includes spectral information.
6. (ORIGINAL) The method of claim 1 wherein the database includes calculated spectral information.